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XII.

OCEAN LANES FOR STEAMSHIPS.

BY BENJAMIN PEIRCE.

Read, May 12, 1874.

THE present paper lays no claim to originality, or even to novelty. It will perform its desired function, if it should have any influence to effect a systematic organization of the paths of the Atlantic steamers, so as to remove the principal source of the dangers of collision. It aims to arouse public attention to the rapidly increasing magnitude of the peril, and induce action before there shall come the irresistible logic of terrible disasters following close upon each other. Such disasters have already occurred, and even at an early period, when the danger was not one-twentieth part of what it is now. When the number of steamers shall be tenfold what it is to-day, — which will occur in the next generation, — each steamer will be exposed to ten times the peril; and, as their number is tenfold, the whole number of collisions will be one hundred-fold its present number. There will be as many in a year as there are now in a century; and every year will have its cruel record of these fearful accidents.

The necessity of protecting the ocean from this danger, by assigning fixed limits to the routes of the steamships, was first considered as early as the year 1855, in a correspondence between the late M. F. Maury and numerous ship-owners and underwriters. This correspondence originated, I believe, with R. B. Forbes, Esq., of Boston; and I think it was then that the expressive designation of ocean lanes was introduced. The subsequent investigations of Mr. Maury referred especially to the ordinary sailing vessels and purely mercantile steamers, which should avoid the proposed lanes just in proportion as they are occupied by swift steamers, for whose use they are intended.

The subject has recently been taken in hand by Professor von Freden, of the North German Observatory, who has collated the routes of the various German steamers, and deduced from them what he regards as a proper route for each month in the year, and in each

direction. They are easily understood by a reference to the chart. It must be observed that the meridian of greatest danger is that of 50° west of Greenwich. This is the meridian of the Banks of Newfoundland, with its dense fogs, its squadrons of fishing-smacks, and its stranded icebergs. It is of the first importance to decide at what point this meridian shall be crossed; and, this point decided, it may not be necessary to impose any other restrictions as to the route to be pursued. All the western passages of the German routes cross the meridian of 50° , between the latitudes of 46° north and $43^{\circ} 42'$ north. The average length of these routes is only about six miles longer than the shortest route which could be pursued, but they cross the Great Banks near their widest and most dangerous part. The eastern German passages are of two classes for the three winter months of October, November, and December, which hardly differ from the shortest possible route, which is exactly the route for October. In the nine remaining months the passages are north of the western routes, crossing the meridian 50° between the latitudes of $44^{\circ} 36'$ north and $42^{\circ} 30'$ north. The two routes of May and June are included within the limits actually adopted for the western routes of the Cunard Line, and are thereby exposed to peculiar risk in the two months where there is the greatest danger from fog and ice. These lanes of the German astronomer are at present propositions, and have not been adopted by either of the lines. The objections to them are that they occupy too great a breadth of the ocean, and especially the whole extent of the Great Banks; that they are different in different months, thus losing the advantage of a single well-defined tract, and introducing perplexity and confusion as to which month each steamer properly belongs; that the opposing routes of different months overlap each other; and especially that the more southern of the eastern routes lie exactly in the track of the Cunard Line on their western passages.

The tracks which have actually been adopted by the Cunard Line are defined with extreme simplicity, and are in a very few words published in all the advertisements. "With the view of diminishing the chances of collision, the steamers of this line will henceforth take a specified course for all seasons of the year. On the outward passage, from Queenstown to New York or Boston, crossing the meridian of 53° at 43° latitude, or nothing to the north of 43° ; on the homeward passage, crossing the meridian of 50° at 42° latitude, or nothing to the north of 42° ." The singular brevity, conciseness, and completeness of these directions mark their author as a man of genius. They are dictated by a regard to that security of life which is the first duty of the

carrier of passengers. Uncompromising fidelity to this duty, and un-failing good judgment in its execution, seem to have secured to this line the unexampled favor of good fortune, or more justly have constituted their good fortune. The routes of the Cunard Line reduce the dangers to the least amount; and, being the same at all seasons, there can be no uncertainty regarding them. I venture, then, to press upon this Academy the expediency of using its influence to induce the other lines of Atlantic steamers to adopt the Cunard routes. It is essential to the success of the system that it should be universally adopted. I am sure you will regard the object as worthy of the earnest action of the Academy. It is important to consider the agencies through which the system must be introduced; whether there be any action of Grovenment which will be required, or whether the whole subject should be left to the ship-owners and underwriters. Some clause introduced into marine policies might be wise and effective, and it might be well to subject all the logs of the steamers to some officer of acknowledged judgment, from whom an unfavorable report would be received as a serious sentence, and one greatly to be dreaded. But, even when the lanes are established, there will still remain considerable danger, unless the steamers are required to assume a uniform speed — say of ten knots an hour — during the continuance of a fog. With these suggestions, I leave the subject in the hands of any committee which may be appointed.